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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/902,027	07/10/2001	Pekka Marjelund	975.357USW1	1526

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EXAMINER	
SWICKHAMER, CHRISTOPHER M	
ART UNIT	PAPER NUMBER
2697	

DATE MAILED: 08/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/902,027	Applicant(s) MARJELUND ET AL.
	Examiner Christopher M Swickhamer	Art Unit 2697

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 July 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *5* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Drawings

1. New corrected drawings are required in this application because the submitted drawings are acceptable for examining purposes only. Applicant is advised to employ the services of a competent patent draftsperson outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-5, 8-9, and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Kokko et al (USP 5,790,534, hereinafter Kokko). Referring to claim 1, Kokko discloses a method for controlling transmission resources of a radio access network adapted to transmit voice calls and packetized data (data packets) in circuit switched (real time) traffic and in packet switched (non-real time) traffic (col. 1, lns. 14-25), the method comprising the steps of: determining the load due to the circuit switched terminals R_{cs} (obtaining information related to transmission resources required for handling real time traffic, col. 6, lns. 45-65); and reserving

transmission resources for handling packet mode (non-real time) traffic based on a knowledge of overall available transmission resources of a radio transceiver device of said radio access network R_{tot} and the information related to the transmission resources required for handling circuit switched (real time) traffic R_{ps} by said terminal (radio transceiver, col. 6, lns. 45-65). Circuit switching refers to real time traffic, while packet switching can be used for nonreal-time traffic (abstract, col. 1, lns. 14-45)

- Referring to claim 2, Kokko discloses a method according to claim 1, wherein said reserving of transmission resources for handling non-real time traffic resides in determining the difference between the overall available transmission resources of said radio transceiver device of said radio access network R_{tot} and the transmission resources required for handling real time traffic R_{cs}, wherein said difference is the reserved transmission resources for the non-real time traffic R_{ps} (col. 6, lns. 6, lns. 34-65).

- Referring to claim 3, Kokko discloses a method according to claim 1, wherein said step of obtaining and reserving is carried out repeatedly upon occurrence of an update condition. The update condition is the end of a periodic interval (abstract, col. 6, lns. 54-65).

- Referring to claim 4, Kokko discloses a method according to claim 3, wherein said update condition resides in the lapse of an update period of 10 ms (col. 6, lns. 57-58).

- Referring to claim 5, Kokko discloses a method according to claim 3, wherein said update condition resides in an the number of mobile terminals sending reservation requests (entering of a RT bearer to the radio network or the leaving of an RT and/or NRT bearer from the network, Fig. 1, col. 6, lns. 34-40, col. 7, lns. 43-col. 8, lns. 7). The load monitor in the base stations tracks the number of allowed permissions for the terminals. The number of terminals

with their requested transmission requirements is used to determine how much capacity is being used, and how much is available to other terminals. The system updates the capacity based on the transmission requirements from the users.

- Referring to claim 8, Kokko discloses a method according to claim 1, wherein the respectively allocated reserved transmission resources are divided into several channels (distinguished on the basis of channel elements, col. 5, lns. 2-3).

- Referring to claim 9, Kokko discloses a method according to claim 8, wherein said channel elements are distinguished by different codes (pre-selected channel element identifiers, col. 5, lns. 3-4).

- Referring to claim 11, Kokko discloses a base station (radio access network control device), adapted to carry out the method according to claim 1 (Fig. 1, col. 6, lns. 65-col. 7, lns. 7). The base station obtains the information from the Base Station controller, and uses this information to allocate capacity to the mobile terminals when requests are received from the terminals (col. 6, lns. 19-65).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kokko in view of Ayyagari et al (USP 6,278,701, hereinafter Ayyagari). Referring to claim 6, Kokko

discloses a method according to claim 3, but does not expressly disclose wherein said update condition resides in that a predetermined time of a day is reached. Ayyagari discloses a system for allocating capacity between voice and data users through control of quality of service requirements, and the activity levels of the users based on the time of day (abstract, col. 2, lns. 65- col. 3, lns. 7, col. 14, lns. 39-41). The system of Kokko could be modified so that the update occurs at periodic intervals are adapted to occur at certain points during the day. The updates use expected traffic patterns for that time of day to modify the allocation of circuit switched traffic and packet switched traffic. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to update the network capacity at specific times of the day. One of ordinary skill in the art would have been motivated to do this since traffic patterns vary over the course of the day. Monitoring the characteristics of the users in the coverage area of the base station would facilitate the planning of the allocation between the different types of traffic. Allocations would be made to accommodate the requested quality of service for the users depending on the traffic characteristics at that specific time of day.

- Referring to claim 7, Kokko discloses a method according to claim 3, wherein the base station uses a detected value of the actually required transmission resources for handling real time traffic (col. 6, lns. 34-col. 7, lns. 7). The load control and load keep track of the available capacity when granting allocations to circuit switched and packet switched traffic. Kokko does not expressly disclose wherein in a very first obtaining step, a predetermined value for the transmission resources required for handling real time traffic is used. Ayyagari discloses a system that keeps track of the traffic patterns when allocating capacity based on the time of day (abstract, Fig. 8A, col. 14-lns. 39-41). The system of Kokko could be modified to where it has

an initial allocating step that uses a predetermined traffic pattern based on the time of day to distribute the capacity between circuit switched and packet switched users. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the system of Kokko, with an initial allocation of the capacity between circuit switched and packet switched users based on a predetermined value. The predetermined value would be the expected traffic pattern for that time of day. One of ordinary skill in the art would have been motivated to do this since it gives an initial best estimate of how to allocate the available capacity before any actual data would need to be collected from the cellular environment. Traffic is unlikely to fluctuate wildly from day to day (Monday of one week vs. Monday of another).

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kokko in view of Widegren et al (USP 6,374,112, hereinafter Widegren). Referring to claim 10, Kokko discloses a method according to claim 9, but does not expressly disclose wherein said channel element identifiers are virtual path identifiers VPI and virtual channel identifiers VCI. Widegren discloses a system that has resource allocation in a CDMA system for ATM from packet switched and circuit switched networks. ATM inherently has VPI/VCI information in the header to identify the mobile from other mobile stations and to identify the path taken to the mobile station (abstract, Fig. 1, Fig. 3, Fig. 4, col. 9, lns. 5-64). The system of Kokko could be modified to use ATM cells as the packets. One of ordinary skill in the art would have been motivated to do this since ATM supports real time and non real time services (col. 9, lns. 33-50). ATM can be used to support theses services in a packet switched and circuit switched environment over a radio channel (col. 10, lns. 37-43).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Wiesen et al, USP 6,317,598. *Device and method for administering and assigning radio transmission channels in mobile radio networks.*
- Kilkki et al, USP 6,421,335. *CDMA communication system and method using priority-based SIMA quality of service class.*

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M Swickhamer whose telephone number is (703) 306.4820. The examiner can normally be reached on 8:00-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (703) 305.4798. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-9571 for regular communications and (703) 872.9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305.3900.

CMS
July 29, 2003

RICKY NGO
PRIMARY EXAMINER